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Titolo	Relations and Kleene Algebra in Computer Science [[electronic resource]] : 11th International Conference on Relational Methods in Computer Science, RelMiCS 2009, and 6th International Conference on Applications of Kleene Algebra, AKA 2009, Doha, Qatar, November 1-5, 2009, Proceedings // edited by Rudolf Berghammer, Ali Jaoua, Bernhard Möller
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Collana	Theoretical Computer Science and General Issues, , 2512-2029 ; ; 5827
Disciplina	005.131
Soggetti	Machine theory Computer science—Mathematics Discrete mathematics Computer science Algebra Formal Languages and Automata Theory Symbolic and Algebraic Manipulation Discrete Mathematics in Computer Science Computer Science Logic and Foundations of Programming Order, Lattices, Ordered Algebraic Structures
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
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Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Knowledge and Structure in Social Algorithms -- Computational Social Choice Using Relation Algebra and RelView -- A Model of Internet Routing Using Semi-modules -- Visibly Pushdown Kleene Algebra and Its Use in Interprocedural Analysis of (Mutually) Recursive Programs -- Towards Algebraic Separation Logic -- Domain and Antidomain Semigroups -- Composing Partially Ordered Monads -- A Relation-Algebraic Approach to Liveness of Place/Transition Nets -- ?-Continuous Idempotent Left Semirings and Their Ideal Completion -- A Semiring Approach to Equivalences, Bisimulations and Control --

General Correctness Algebra -- Foundations of Concurrent Kleene Algebra -- Armstrong's Inference Rules in Dedekind Categories -- Data Mining, Reasoning and Incremental Information Retrieval through Non Enlargeable Rectangular Relation Coverage -- Collagories for Relational Adhesive Rewriting -- Cardinal Addition in Distributive Allegories -- Relational Methods in the Analysis of While Loops: Observations of Versatility -- Modalities, Relations, and Learning -- The Cube of Kleene Algebras and the Triangular Prism of Multirelations -- Discrete Duality for Relation Algebras and Cylindric Algebras -- Contact Relations with Applications -- A While Program Normal Form Theorem in Total Correctness -- Complements in Distributive Allegories -- On the Skeleton of Stonian p-Ortholattices.

Sommario/riassunto

The book constitutes the joint refereed proceedings of the 11th International Conference on Relational Methods in Computer Science, ReMiCS 2009, and the 6th International Conference on Applications of Kleene Algebras, AKA 2009, held in Doha, Qatar in November 2009. The 22 revised full papers presented together with 2 invited papers were carefully reviewed and selected from numerous submissions. The papers describe the calculus of relations and similar algebraic formalisms as methodological and conceptual tools with special focus on formal methods for software engineering, logics of programs and links to neighbouring disciplines. Their scope comprises relation relation algebras and Kleene algebras, related formalisms such as process algebras, fixed point calculi, idempotent semirings, quantales, allegories, dynamic algebras, cylindric algebras and their applications in areas such as verification, analysis and development of programs and algorithms relational formal methods such as B or Z, tabular methods, algebraic approaches to logics of programs, modal and dynamic logics, interval and temporal logics, algebraic semantics of programming languages , graph theory and combinatorial optimization, games, automata and language theory, mechanised and automated reasoning, decision procedures, spatio-temporal reasoning, knowledge acquisition, preference and scaling methods or information systems.
